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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/246,451    02/09/99    ARNOLD    F    93731E827US1

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NEW YORK NY 10022

HM32/1004

EXAMINER

RAO, M

ART UNIT

PAPER NUMBER

1652

*8*

DATE MAILED:

10/04/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/246,451**

Applicant(s)

**Arnold et al.**

Examiner  
**Manjunath N. Rao**

Group Art Unit  
**1652**

☒ Responsive to communication(s) filed on Feb 9, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 1 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

- ☒ Claim(s) 1-145 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☒ Claims 1-145 are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- ☐ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-19, 30, 35, 37, 39, 41, 43, 45, 50, 53, 54, 57, 80 and 139, drawn to a method of detecting an oxidation enzyme, classified in class 435, subclass 25.
  - II. Claims 20-29, 31-34, 36, 38, 40, 42, 44, 46-49, 51, 52, 55, 56, 64, and 81, drawn to a method of detecting an oxygenase enzyme (method 1), classified in class 435, subclass 25.
  - III. Claims 58-63, 82 and 96, drawn to a method of detecting an oxygenase (method 2) comprising the absence of one of its coenzymes or ancillary proteins, classified in class 435, subclass 25.
  - IV. Claims 65-79, 83-87 and 97, drawn to a method for evaluating a test enzyme, classified in class 435, subclass 6.
  - V. Claims 88-95, 98-106, drawn to a method of screening for oxygenase enzymes, classified in class 435, subclass 6.
  - VI. Claims 107-125, 130-131, 133-136, drawn to an oxygenase enzyme variant, classified in class 435, subclass 189.
  - VII. Claims 126-129, drawn to a method for evolving an oxidation enzyme, classified in class 435, subclass 440.

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VIII. Claims 132, drawn to a method for evaluating the reaction conditions for an oxidation catalyst, classified in class 435, subclass 25.

IX. Claims 137-138, 140-145, drawn to a method for detecting an oxidation catalyst, classified in class 435, subclass 25.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I-V, VII-IX are patentably distinct from each other. The method of detecting an oxidation enzyme of group I, the method of detecting an oxygenase enzyme (method 1) of group II, the method of detecting an oxygenase (method 2) comprising the absence of one of its coenzymes or ancillary proteins of group III, the method for evaluating a test enzyme of group IV, the method of screening for oxygenase enzymes of group V, the method for evolving an oxidation enzyme of group VII, the method for evaluating the reaction conditions for an oxidation catalyst of group VIII, and the method for detecting an oxidation catalyst of group IX are all unrelated as they comprise distinct steps, utilize different products and produce different results. The groups have acquired separate status in the art and separate fields of search.

3. Inventions VI and I-V, VII-IX are patentably distinct from each other. The variant enzyme polypeptide of group VI is neither made nor used by the methods of groups I-V and VII-IX. They do not require each other for practice; have separate utilities, such as use of the group VI polypeptide to catalyze an oxidation/reduction reaction versus the use of the methods as

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stated above; and are subject to separate manufacture and sale. The groups have acquired separate status in the art and separate fields of search.

3. Inventions VI and VII-IX are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the variant oxygenase enzyme can be used to raise antibodies as opposed to its use in evolving an oxygenase enzyme or evaluating the reaction conditions for an oxidation catalyst or for detecting an oxidation catalyst.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. This application contains claims directed to the following patentably distinct species of the claimed invention:

a) Organic substrate, claim 6, 17; 21, 47, 71, 77, 95, 138, .

B) Coupling enzyme, claim 14, 18, 23, 47, 95, 142

C) Oxygenase enzyme, claims 28-29, 30, 31,

D) Test enzyme, 37, 38, 48, 92

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E) Coenzyme, 53, 55, 59, 64,;

F) Cofactor, 62

F) Variant/mutant enzyme, claim 70

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 20, 58, 65, 88, 107, 126, 132, and 137 are generic in each restricted group.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

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examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. A telephone call was made to David Schram on 9-28-2000 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath Rao whose telephone number is (703) 306-5681. The Examiner can normally be reached on M-F from 6:30 a.m. to 3:00 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, P.Achutamurthy, can be reached on (703) 308-3804. The fax number for Official Papers to Technology Center 1600 is (703) 305-

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3014. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Manjunath N. Rao

October 2, 2000

*Rebecca Remy*  
RECEIVED  
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